REMARKS

In response to the above identified Office Action, the Applicants respectfully request reconsideration and review of the following remarks and the above amendments. Applicants have amended claims 8 and 16. Applicants have not added any claims or cancelled any claims. Accordingly, claims 1-30 remain pending in the application.

I.   Claims Rejected Under 35 U.S.C. § 112

Claims 8 and 16 have been rejected for including a term "the prediction" which has insufficient antecedent basis. Applicants have amended this claim as suggested by the Examiner. Accordingly, reconsideration and withdrawal of the indefiniteness rejection of claims 8 and 16 are requested.

II.   Claims Rejected Under 35 U.S.C. § 102

Claims 1-3, 6, 7, 9-11, 14, 15 and 17-19 stand rejected under 35 U.S.C. § 102 as allegedly being anticipated by U.S. Patent No. 6988190 issued to Park, et al. (hereinafter "Park"). Claims 1, 2, 6-10, 14-18, 20-22 and 25-29 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by "Fetching Instruction Streams" by Ramirez et al. (hereinafter "Ramirez"). Claims 1, 2, 6-10, 14-18, 20-22 and 25-29 stand rejected under 35 U.S.C. § 102(b) as being anticipated by "Exploiting Instruction Level Parellelism in Processors by Caching Scheduled Groups" by Nair et al. (hereinafter "Nair 1"). Claims 1, 2, 4-10, 12-18, 20-22 and 24-29 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,304,962 issued to Nair, et al. (hereinafter "Nair 2").

To establish anticipation, the Examiner must show that the cited references teach or suggest each of the elements of a claim. The Examiner has declined to set forth specific arguments to establish anticipation of these claims stating that the "first three independent claims and most of their other two independent claims as well as much of the balance of the applicants' dependent claims were directed to the basic concepts of instruction traces and trace cache design which long preceded applicants' filing." The Examiner goes on to state that "were the concepts not so well known, the Examiner might have spent time on explaining the prior art."

Applicants believe that the Examiner has not given proper attention to each of the elements set forth in the independent claims. Applicants have reviewed each of the cited references that the Examiner provides but have been unable to discern any part in any of these documents that teach "defining a plurality of streams" as recited in the independent claims.

Claims 1, 9 and 17 include the elements of "defining a plurality of streams based on the examining, wherein each stream comprises a sequence of basic blocks in which only a last block in the sequence ends in a branch instruction, the execution of which causes program flow to branch, the remaining basic blocks in the stream each ending in a branch instruction, the execution of which does not cause program flow to branch" (claim 1) or similar elements. Claims 20 and 27 include the elements of "wherein the predicted stream comprises a sequence of basic blocks in which only a last block in the sequence ends in a branch instruction, the execution of which causes program flow to branch, the remaining basic blocks each ending in a branch instruction, the execution of which does not cause program flow to branch" (claim 20) or similar elements. The cited references do not teach defining such streams. A trace defined by Park, as illustrated in Figure 5, is comprised of blocks that each have instructions at the end which branch. The definition of a trace according to Ramirez "may contain multiple basic

blocks, and several branches, regardless of being taken or not taken." See page 374, first col., 2nd paragraph of Ramirez. Nair 2 teaches the use of a "super block" that "includes a set of instructions and consecutive address locations terminated by a branch instruction known to have been taken." See abstract Nair 2. And finally, Nair 1 teaches the use of dynamic instruction formatting (DIF) or groups of instructions that span several basic blocks are cached and scheduled together. See the 2nd paragraph of the abstract of Nair 1. Thus, none of the cited references teach the very carefully claimed relationship between the basic blocks in the organization of the plurality of streams where "only a last block in a sequence ends in a branch, the execution of which causes program flow to branch" and the other "basic blocks each ending in a branch instruction, the execution at which does not cause program flow to branch." Thus, the Examiner has failed to establish that any of the cited references teach these elements of independent claims 1, 9, 17, 20 or 27. Accordingly, reconsideration and withdrawal of the anticipation rejection of these claims based on Park, Ramirez, Nair 1 and Nair 2 are requested.

In regard to claims 2, 4-8, 10, 12-16, 18, 21, 22, 24-26, 28 and 29. These claims depend from independent claims 1, 9, 17, 20 and 27 and incorporate the limitations thereof. Thus, at least for the reasons mentioned above in regard to the independent claims, these claims are not anticipated by the cited references. Also, Applicants believe that claims 7, 15 and 26, as amended, are not taught by the cited references. Specifically, the cited references do not teach storing an "ISA-implementation specific instructions" in "memory locations contiguous to the basic blocks." If the Examiner maintains the rejection of any of these claims, the Applicants respectfully request that the Examiner particularly point out those sections of the cited references that teach each of these elements. Accordingly, reconsideration and withdrawal of the anticipation rejection of these claims are requested.

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Also, Applicants respectfully draw the Examiner's attention to MPE § 706.02 which requires that a "prior art rejection should ordinarily be confined strictly to the best available art." The Examiner has rejected many of the claims based on multiple references. Thus, Applicants request that the Examiner reconsider the rejections and restrict them to those based on the best available art.

III.   Claims Rejected Under 35 U.S.C. § 103

Claims 3, 11, 19, 23 and 30 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nair 2. Applicants respectfully disagree for the following reasons.

To establish a *prima facie* case of obviousness, the Examiner must show that the cited reference teaches or suggest the elements of the claim. Claims 3, 11, 19, 23 and 30 depend from independent claims 1, 9, 17, 20 and 27 respectively. Thus, these claims incorporate each of the limitations of those independent claims. Therefore, at least for the reasons mentioned above in regard to the independent claims, Nair 2 fails to teach or suggest each of the elements of these claims. Accordingly, reconsideration and withdrawal of the obviousness rejection of these claims are requested.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely claims 1-30, patentably define the subject invention over the prior art of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (310) 207 3800.

Respectfully submitted,

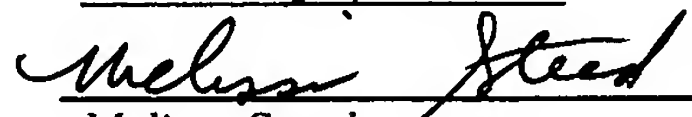BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: _4/27_, 2006

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